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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/764,712	01/18/2001	Paul W. Dent	8194-36DVCT	7572

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EXAMINER	
NGUYEN, TOAN D	
ART UNIT	PAPER NUMBER
2616	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/05/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	09/764,712	DENT, PAUL W.	
	Examiner	Art Unit	
	Toan D. Nguyen	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *20 October 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *20,21,30-32 and 34-42* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☐ Claim(s) *20,21,30-32,34-37 and 39-42* is/are rejected.

7)☒ Claim(s) *38* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *18 January 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. In view of the Appeal Brief filed on October 20, 2006, PROSECUTION IS HEREBY REOPENED. A non-final office action is set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) initiate a new appeal by filing a notice of appeal under 37 CFR 41.31 followed by an appeal brief under 37 CFR 41.37. The previously paid notice of appeal fee and appeal brief fee can be applied to the new appeal. If, however, the appeal fees set forth in 37 CFR 41.20 have been increased since they were previously paid, then appellant must pay the difference between the increased fees and the amount previously paid.

A Supervisory Patent Examiner (SPE) has approved of reopening prosecution by signing below:

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 20, 31-32, 34-37, and 39-42 are rejected under 35 U.S.C. 102(e) as being anticipated by Ritter et al. (US 5,561,842).

For claim 20, Ritter et al. disclose mobile radio network, comprising:

communicating between the plurality of base stations and radiotelephones (col. 1 lines 5-11) using a common plurality of spreading codes (col. 1 line 55), wherein each base station uses the common plurality of spreading codes (col. 1 lines 46-55), and

allocating cellular radiotelephone frequencies among said plurality of base stations according to a first frequency allocation system for a first one of said spreading codes and according to a second frequency allocation system different from said first frequency allocation system for a second one of said spreading codes (figures 4a-b, references k_1-k_5 , col. 3 lines 44-60).

For claim 31, Ritter et al. disclose wherein the first frequency allocation system comprise a first frequency reuse pattern, and wherein the second frequency allocation system comprises a second frequency reuse pattern (figure 4a, col. 3 lines 44-50).

For claim 32, Ritter et al. disclose mobile radio network, comprising:

allocating frequencies for use in the plurality of cells (col. 1 lines 46-55) such that respective different frequency allocations are provided for respective first and second spreading codes used in each of the cells, wherein the step of allocating frequencies for use in the plurality of cells comprises:

applying a first frequency reuse pattern for the first spreading code (figures 4a-b, references k_1-k_5 , col. 3 lines 44-60); and

applying a second frequency reuse pattern for the second spreading code (figures 4a-b, references k_1-k_5 , col. 3 lines 44-60).

For claim 34, Ritter et al. disclose wherein the step of allocating comprises:

adaptively allocating frequencies for use with the first spreading code according to a first adaptive allocation scheme (figures 4a-b, references k_1-k_5 , col. 3 lines 44-60); and

adaptively allocating frequencies for use with the second spreading code according to a second adaptive allocation scheme (figures 4a-b, references k_1-k_5 , col. 3 lines 44-60).

For claim 35, Ritter et al. disclose wherein said first and said second spreading codes comprises one of plurality of direct-sequence-modulation codes, a plurality of frequency-hopping codes, and a plurality of combined frequency-hopping/direct-sequence-modulation codes (col. 2 lines 3-4).

For claim 36, Ritter et al. disclose mobile radio network, comprising:

a plurality of code division multiple access (CDMA) cellular radiotelephone base stations (col. 1 lines 62-64) that communicate with radiotelephones on a plurality of frequencies (col. 1 lines 5-11), the base stations each using a common plurality of spreading codes and using the frequencies that are allocated among said plurality of base stations (col. 1 lines 46-55) such that frequencies are allocated for a first one of said spreading codes according to a first frequency allocation system and are allocated for a second one of said spreading codes according to a second frequency allocation

system different from said first frequency allocation system (figures 4a-b, references k_1-k_5 , col. 3 lines 44-60).

For claim 37, Ritter et al. disclose wherein said common plurality of spreading codes is one of a plurality of direct-sequence-modulation codes, a plurality of frequency-hopping codes, and a plurality of combined frequency-hopping/direct-sequence-modulation codes (col. 2 lines 3-4).

For claim 39, Ritter et al. disclose mobile radio network, comprising:

a plurality of cells (col. 1 lines 5—7); and

a code reuse partitioning circuit operative to allocate frequencies for use in the plurality of cell such that respective different frequency allocations are provided for respective first and second spreading codes used in each of the cells (figures 4a-b, col. 3 lines 44-60).

For claim 40, Ritter et al. disclose wherein the code reuse partitioning circuit is operative to apply a first frequency reuse pattern for a first spreading code and to apply a second frequency reuse pattern for a second spreading code (figures 4a-b, col. 3 lines 44-60).

For claim 41, Ritter et al. disclose wherein the code reuse partitioning circuit is operative to adaptively allocating frequencies for use with the first spreading code according to a first adaptive allocation scheme and to adaptively allocating frequencies for use with the second spreading code according to a second adaptive allocation scheme (figures 4a-b, col. 3 lines 44-60).

For claim 42, Ritter et al. disclose wherein the first spreading code and the second spreading codes comprises one of plurality of direct-sequence-modulation codes, a plurality of frequency-hopping codes, and a plurality of combined frequency-hopping/direct-sequence-modulation codes (col. 2 lines 3-4).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 21 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ritter et al. (US 5,561,842) in view of Kaufmann et al. (US 4,984,247).

For claims 21 and 30, Ritter et al. do not expressly disclose wherein said step of allocating is preceded by a step of synchronizing said plurality of spreading codes among said plurality of base stations so that said periods of said plurality of spreading codes are concurrent, to produce synchronized spreading codes among said plurality of base stations. In an analogous art, Kaufmann et al. disclose wherein said step of allocating is preceded by a step of synchronizing said plurality of spreading codes among said plurality of base stations so that said periods of said plurality of spreading codes are concurrent, to produce synchronized spreading codes among said plurality of base stations (col. 7 lines 4-9).

Kaufmann et al. disclose the step of synchronizing said common plurality of spreading codes (col. 7 lines 4-9 as set forth in claim 30).

One skilled in the art would have recognized the wherein said step of allocating is preceded by a step of synchronizing said plurality of spreading codes among said plurality of base stations so that said periods of said plurality of spreading codes are concurrent, to produce synchronized spreading codes among said plurality of base stations, and would have applied Kaufmann et al.'s code generators in Ritter et al.'s dynamic channel allocation based on the CDMA. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention, to use Kaufmann et al.'s digital radio transmission system for a cellular network, using the spread spectrum method in Ritter et al.'s mobile radio network with the motivation being to make full use of the advantage of the optimized codes (col. 7 lines 4-5).

Allowable Subject Matter

6. Claim 38 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Toan D. Nguyen whose telephone number is 571-272-3153. The examiner can normally be reached on M-F (7:00AM-4:30PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Huy Vu can be reached on 571-272-3155. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TN

TN

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